This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented): A magnetic head including a spin valve sensor comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer being fabricated above said G1 layer, a PtMn layer being disposed above said seed layer and at least one pinned magnetic layer and at least one free magnetic layer being disposed above said PtMn layer; and

wherein said seed layer includes an Al_2O_3 sublayer, an NiMnO sublayer, and an Si sublayer, and wherein said PtMn layer is disposed upon said Si sublayer.

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2. (original): A magnetic head as described in claim 1 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

3. (original): A magnetic head as described in claim 1 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å.

4. (original): A magnetic head as described in claim 2 wherein said PtMn layer has a thickness of approximately 120 Å.

5. (original): A magnetic head as described in claim 1 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

6. (original): A magnetic head as described in claim 5 wherein said spin valve sensor layers include at least one pinned magnetic layer having a composition including CoFe and at least one spacer layer having a composition including Cu, and at least one free magnetic layer having a composition including Co or CoFe.

7. (previously presented): A magnetic head as described in claim 1 wherein said Si sublayer has an upper surface having a crystallographic surface that differs from the crystallographic surface of a deposited Si sublayer.

8. (previously presented): A magnetic head including a spin valve sensor comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer being fabricated above said G1 layer, a PtMn layer being disposed above said seed layer and at least one pinned magnetic layer and at least one free magnetic layer being disposed above said PtMn layer; and

wherein said seed layer has an upper surface comprised of Si having a crystallographic surface that differs from the upper crystallographic surface of a deposited Si seed layer, and wherein said PtMn layer is disposed upon said surface of said Si seed layer.

9. (original): A magnetic head as described in claim 8, wherein said seed layer includes seed sublayers including Al_2O_3, NiMnO and Si.

10. (original): A magnetic head as described in claim 9 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

11. (original): A magnetic head as described in claim 9 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å.

12. (original): A magnetic head as described in claim 8 wherein said PtMn layer has a thickness of approximately 120 Å.

13. (original): A magnetic head as described in claim 8 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

14. (original): A magnetic head as described in claim 13 wherein said spin valve sensor layers include at least one pinned magnetic layer having a composition including CoFe and at least one spacer layer having a composition including Cu, and at least one free magnetic layer having a composition including Co or CoFe.

15. (previously presented): A hard disk drive, including at least one magnetic head having a read head portion comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer being fabricated above said G1 layer, a PtMn layer being fabricated above said seed layer and at least one pinned magnetic layer and at least one free magnetic layer; and

wherein said seed layer includes an Al_2O_3 sublayer, an NiMnO sublayer and an Si sublayer, and wherein said PtMn layer is disposed upon said Si sublayer.

16. (original): A hard disk drive as described in claim 15 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

17. (original): A hard disk drive as described in claim 15 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å.

18. (original): A hard disk drive as described in claim 16 wherein said PtMn layer has a thickness of approximately 120 Å.

19. (original): A hard disk drive as described in claim 15 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

20. (original): A hard disk drive as described in claim 19 wherein said spin valve sensor layers include at least one pinned magnetic layer having a composition including CoFe and at least one spacer layer having a composition including Cu, and at least one free magnetic layer having a composition including Co or CoFe.

21. (previously presented): A hard disk drive as described in claim 15 wherein said Si sublayer has an upper surface having a crystallographic surface that differs from the crystallographic surface of a deposited Si sublayer.

22. (previously presented): A hard disk drive, including at least one magnetic head having a read head portion comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer being fabricated above said G1 layer, a PtMn layer being fabricated above said seed layer and at least one pinned magnetic layer and at least one free magnetic layer; and

wherein said seed layer has an upper surface comprised of Si having a crystallographic surface that differs from the crystallographic surface of a deposited Si seed layer, and wherein said PtMn layer is disposed upon said surface of said Si seed layer.

23. (original): A hard disk drive as described in claim 22, wherein said seed layer includes seed sublayers including Al_2O_3, NiMnO and Si.

24. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

25. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å.

26. (original): A hard disk drive as described in claim 24 wherein said PtMn layer has a thickness of approximately 120 Å.

27. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

28. (original): A hard disk drive as described in claim 27 wherein said spin valve sensor layers include at least one pinned magnetic layer having a composition including CoFe and at least one spacer layer having a composition including Cu, and at least one free magnetic layer having a composition including Co or CoFe.

29-40 (cancelled)

41. (new) A magnetic head as described in claim 8 wherein said crystallographic surface of said seed layer is rougher than the upper crystallographic surface of a deposited Si seed layer.

24. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

25. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å.

26. (original): A hard disk drive as described in claim 24 wherein said PtMn layer has a thickness of approximately 120 Å.

27. (original): A hard disk drive as described in claim 23 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

28. (original): A hard disk drive as described in claim 27 wherein said spin valve sensor layers include at least one pinned magnetic layer having a composition including CoFe and at least one spacer layer having a composition including Cu, and at least one free magnetic layer having a composition including Co or CoFe.

29-40 (cancelled)

41. (new) A magnetic head as described in claim 8 wherein said crystallographic surface of said seed layer is rougher than the upper crystallographic surface of a deposited Si seed layer.

42. (new) A hard disk drive as described in claim 22 wherein said crystallographic surface of said seed layer is rougher than the upper crystallographic surface of a deposited Si seed layer.

43. (new): A magnetic head including a spin valve sensor comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer including a sublayer being composed of Si and being fabricated above said G1 layer, a PtMn layer being disposed upon said Si seed sublayer, and at least one pinned magnetic layer and at least one free magnetic layer being disposed above said PtMn layer; and

wherein said Si seed sublayer has a body portion and an upper surface, and wherein said body portion has a first crystallographic structure and said upper surface has a crystallographic structure that differs from said first crystallographic structure, and wherein said PtMn layer is disposed upon said upper surface of said Si seed layer.

44. (new): A magnetic head as described in claim 43, wherein said crystallographic structure of said upper surface is rougher than said first crystallographic structure.

45. (new): A magnetic head as described in claim 43, wherein said seed layer includes seed sublayers including Al_2O_3 and NiMnO.

46. (new): A magnetic head as described in claim 45 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

47. (new): A magnetic head as described in claim 43 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.

48. (new): A hard disk drive, including at least one magnetic head having a read head portion comprising:

a magnetic shield layer (S1) being fabricated above a substrate base;

a first electrical insulation layer (G1) being fabricated above said S1 layer;

a spin valve sensor structure being disposed above said G1 layer;

wherein said spin valve sensor structure includes a seed layer including a sublayer being composed of Si and being fabricated above said G1 layer, a PtMn layer being disposed upon said Si seed sublayer, and at least one pinned magnetic layer and at least one free magnetic layer being disposed above said PtMn layer; and

wherein said Si seed sublayer has a body portion and an upper surface, and wherein said body portion has a first crystallographic structure and said upper surface has a crystallographic structure that differs from said first crystallographic structure, and wherein said PtMn layer is disposed upon said upper surface of said Si seed layer.

49. (new): A hard disk drive as described in claim 48, wherein said crystallographic structure of said upper surface is rougher than said first crystallographic structure.

50. (new): A hard disk drive as described in claim 48, wherein said seed layer includes seed sublayers including Al_2O_3, and NiMnO.

51. (new): A hard disk drive as described in claim 50 wherein said Si seed sublayer is fabricated to have a thickness of approximately 10 to 40 Å.

52. (new): A hard disk drive as described in claim 48 wherein said Si seed sublayer is fabricated to have a thickness of approximately 20 Å and said PtMn layer has a thickness of approximately 120 Å.